

FIG. 1

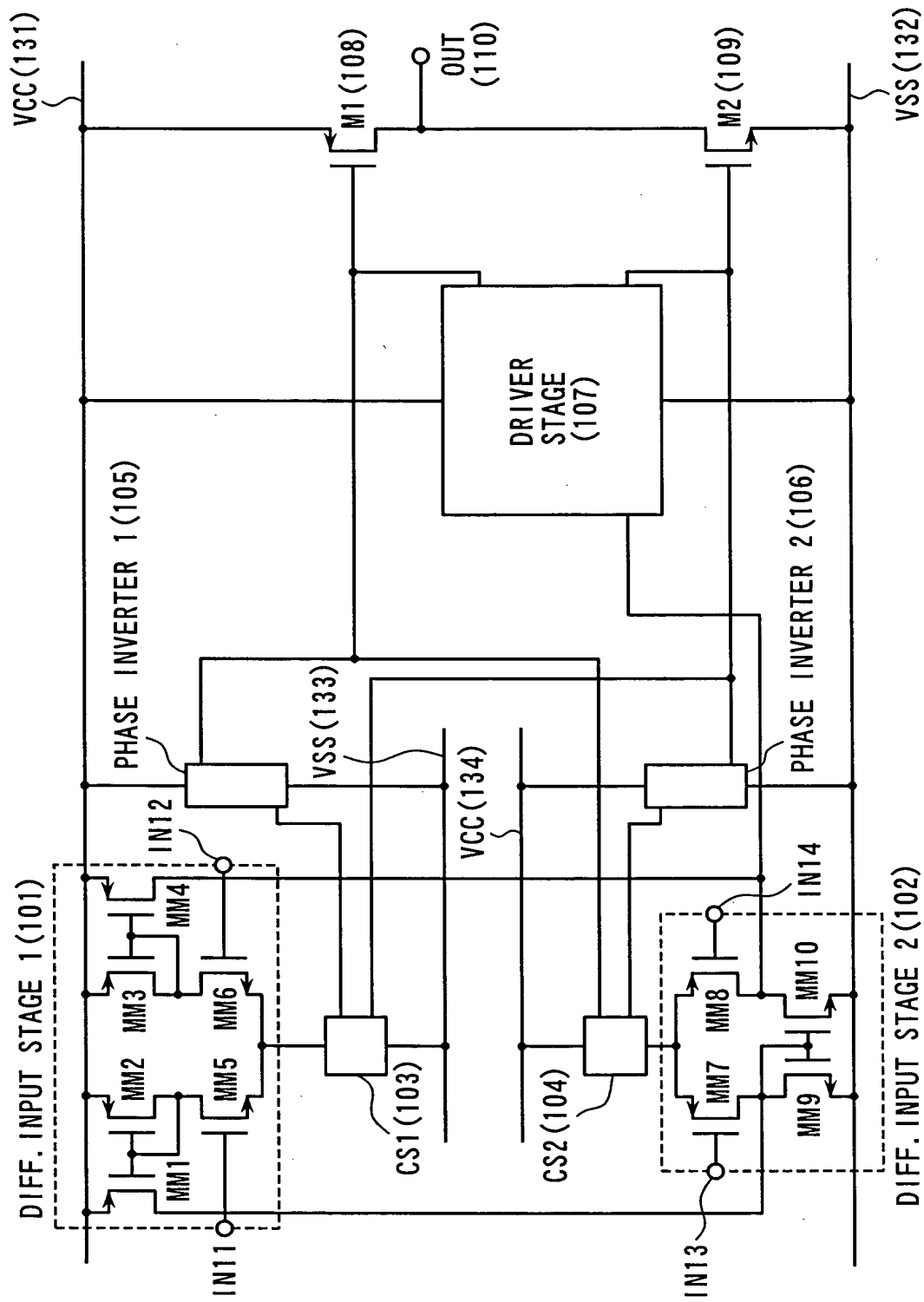


FIG. 2

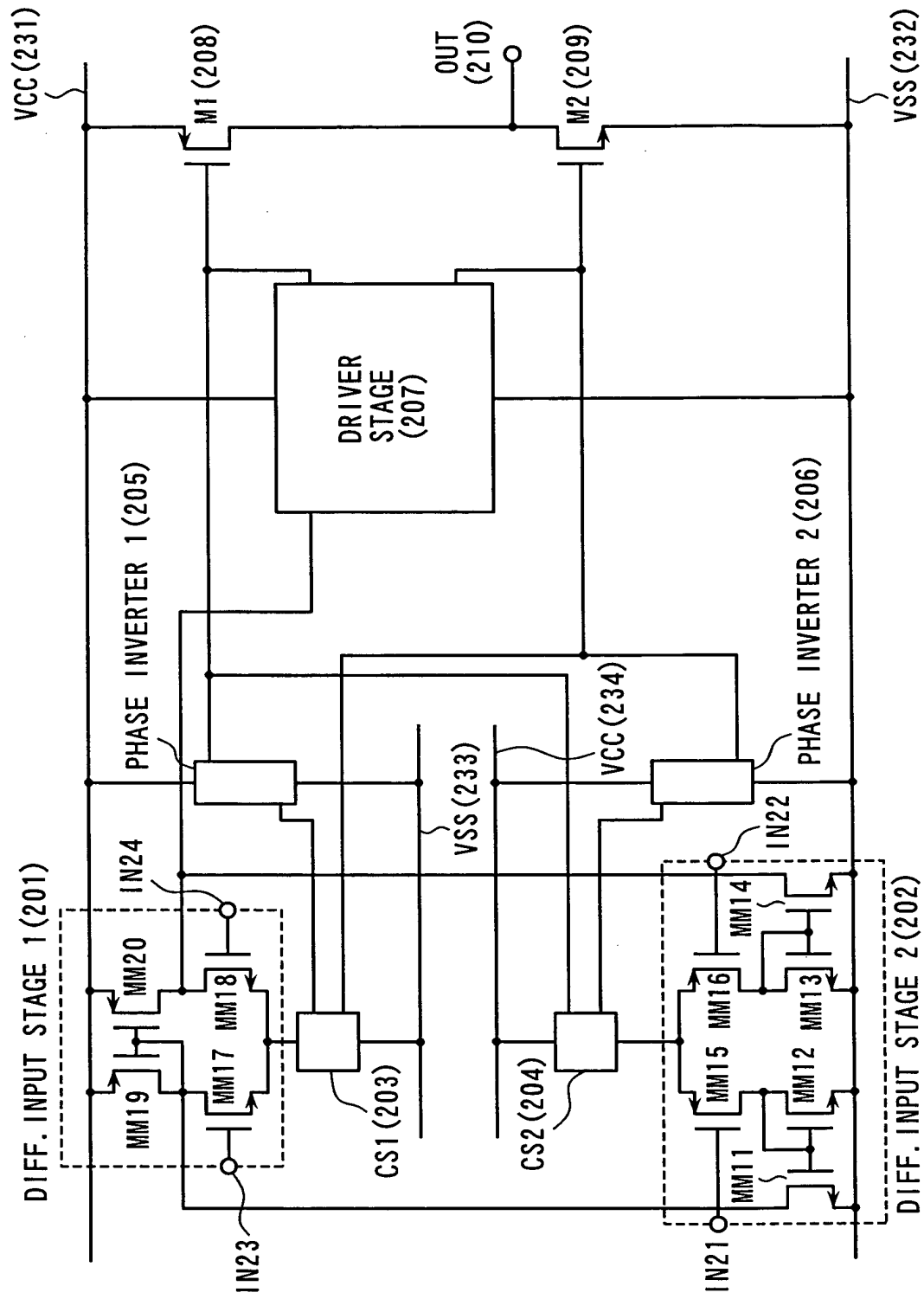


FIG. 3

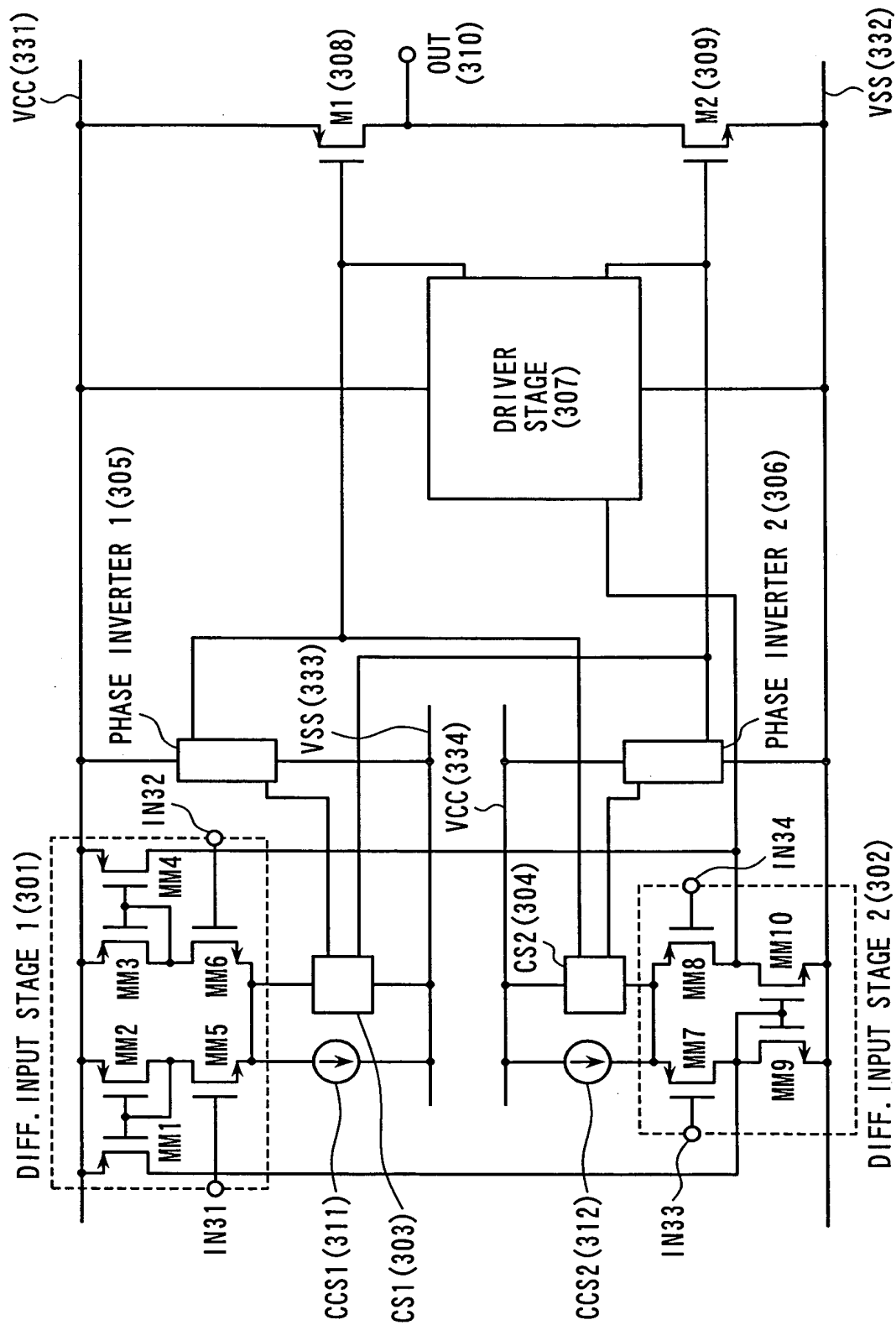


FIG. 4

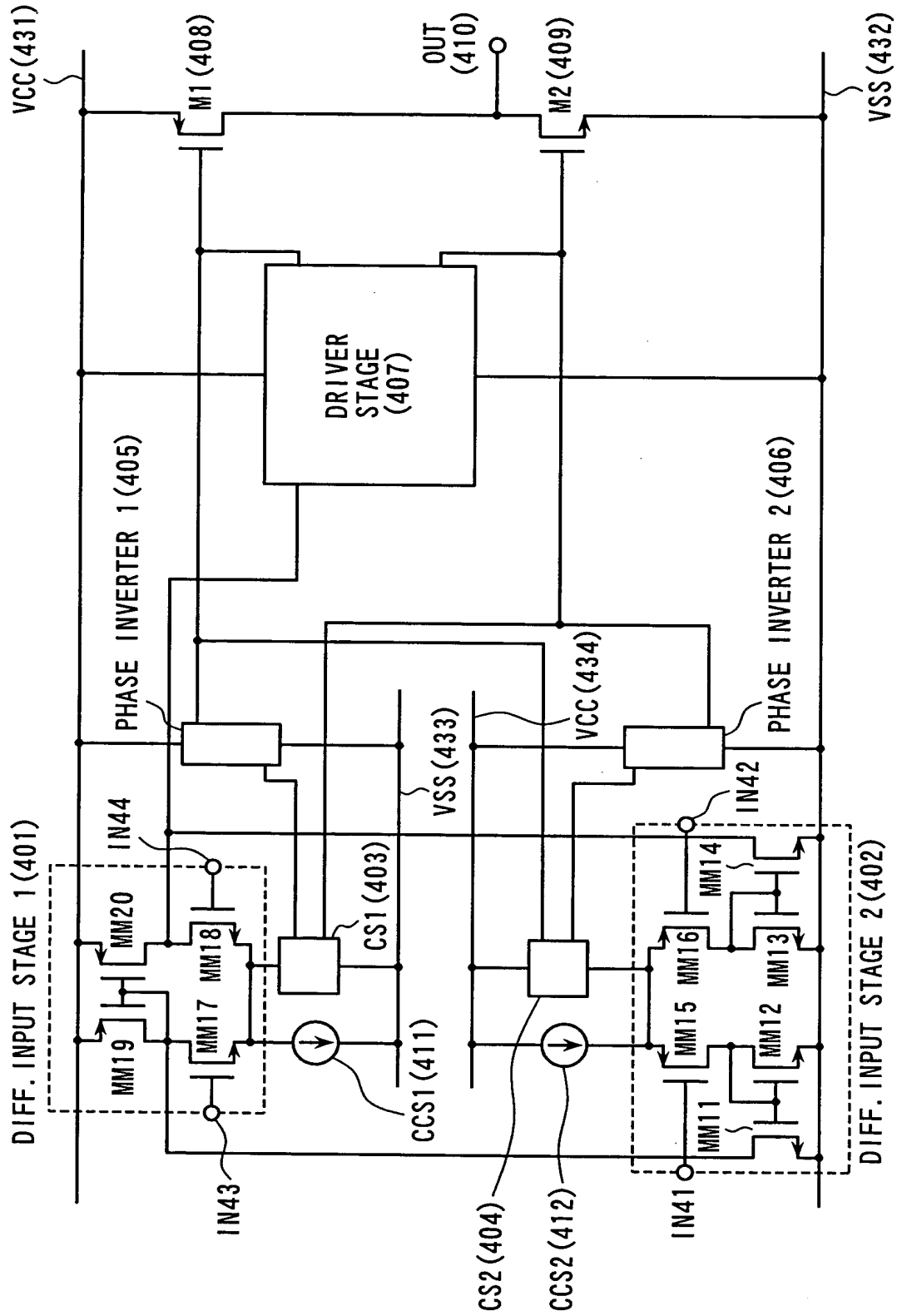


FIG. 5

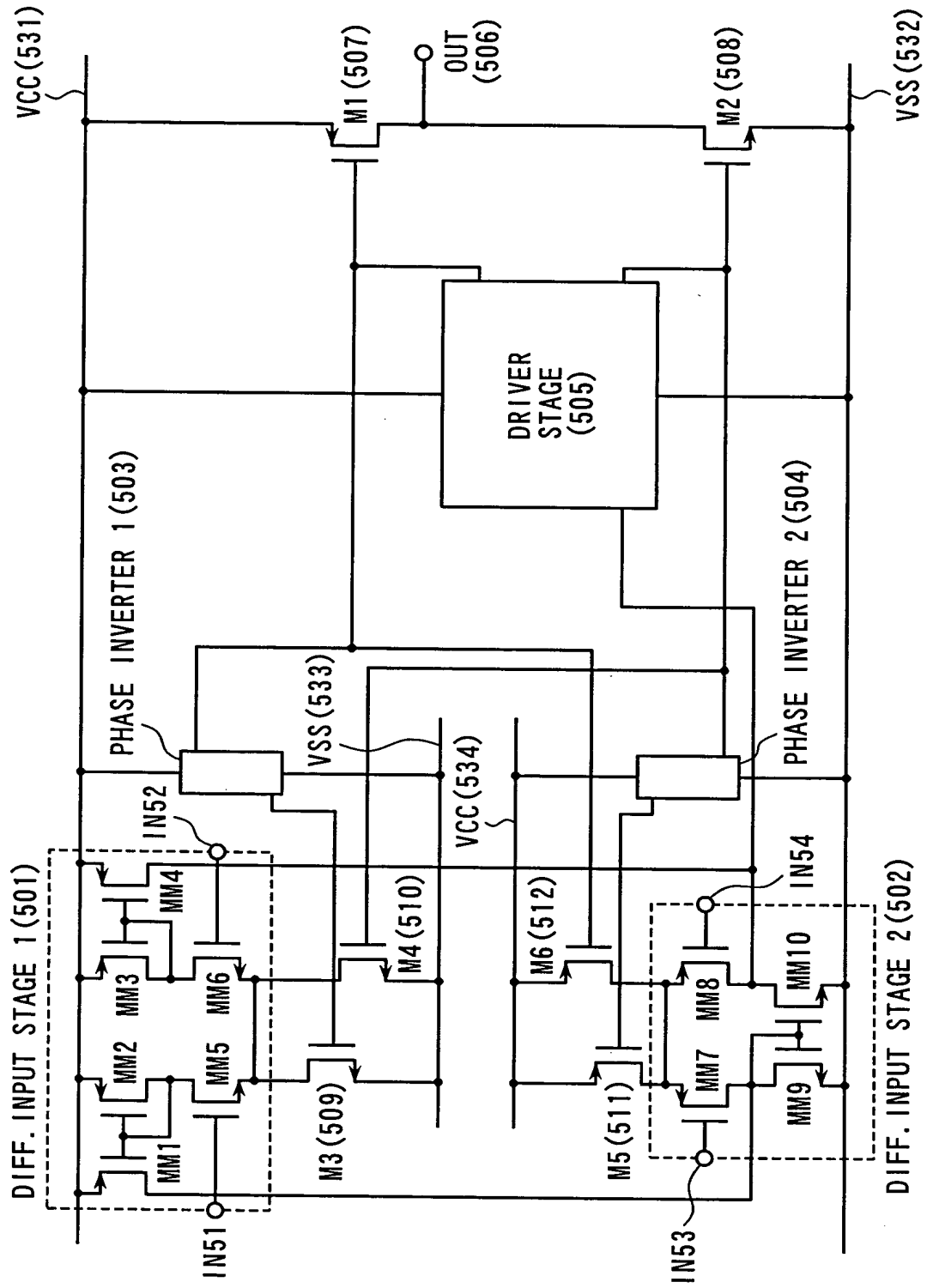


FIG. 6

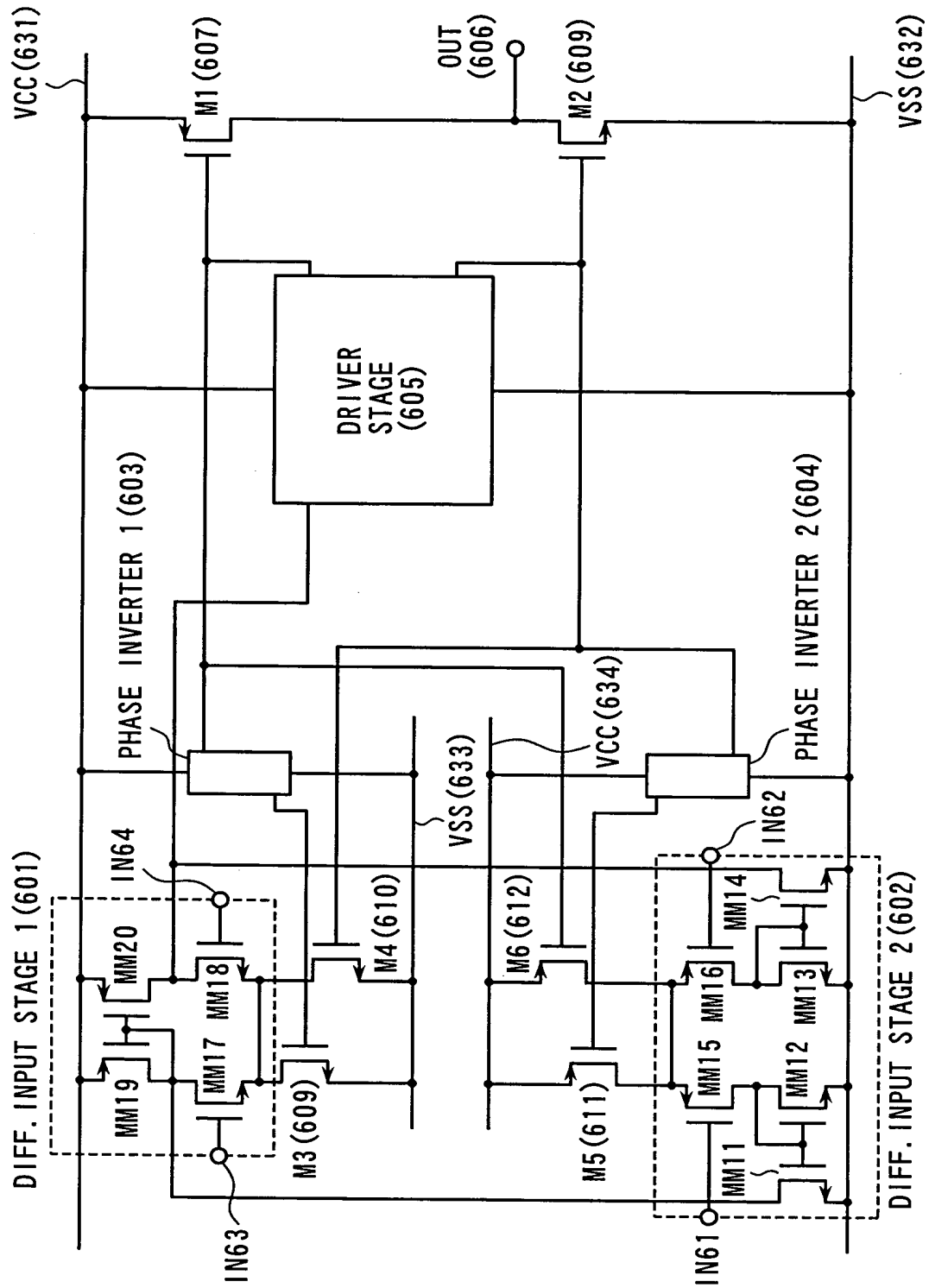
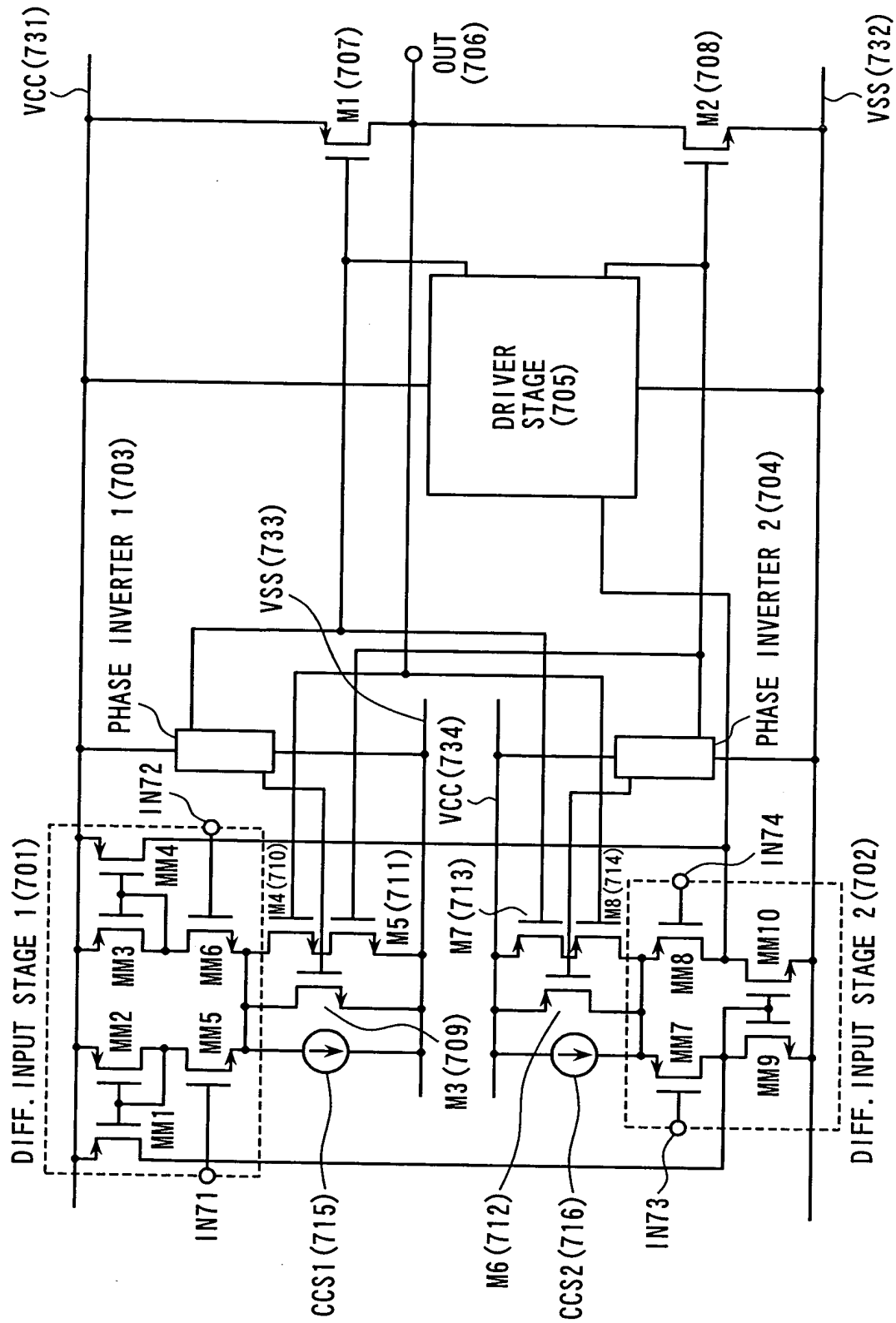


FIG. 7



**FIG. 8**

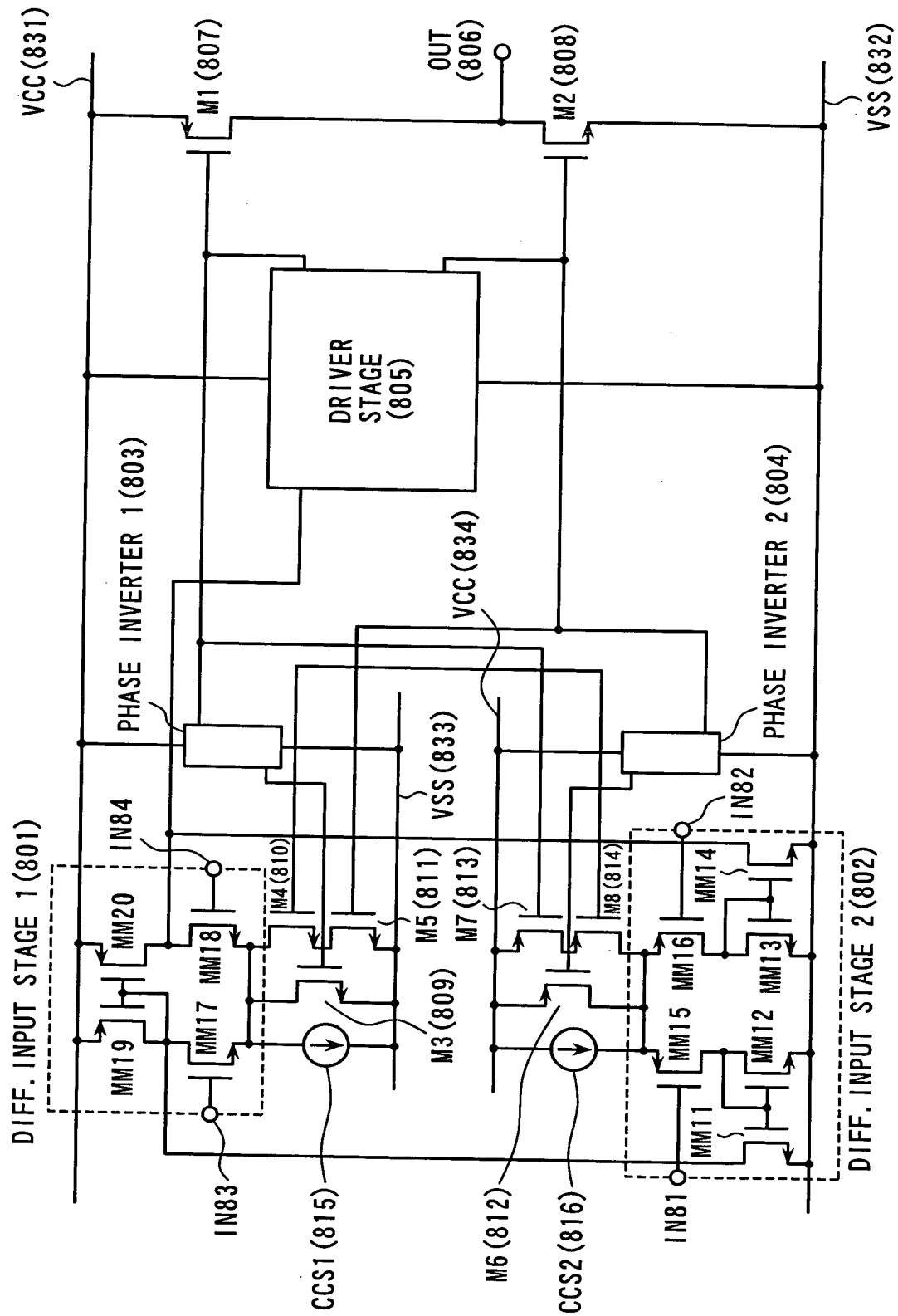




FIG. 9

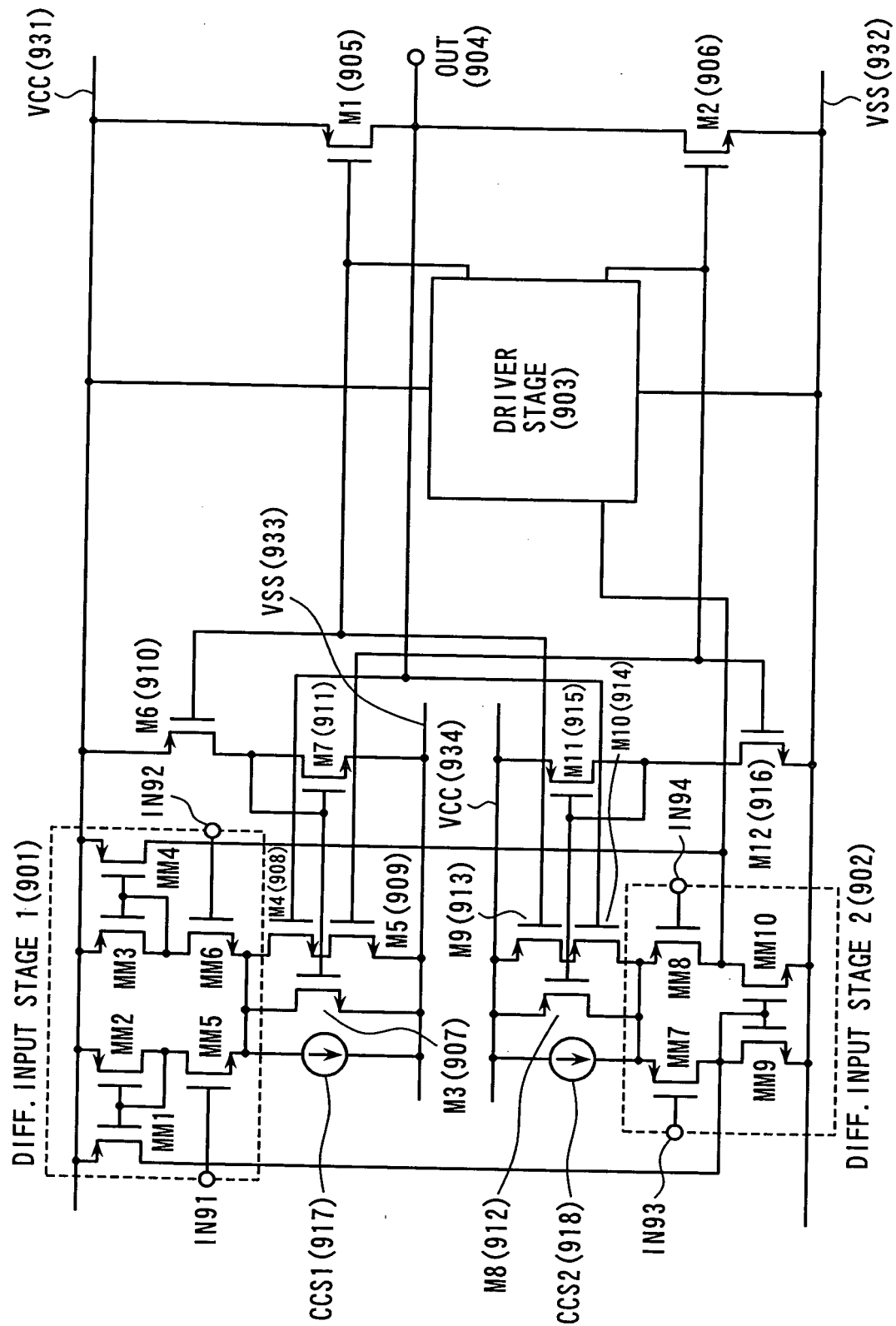


FIG. 10

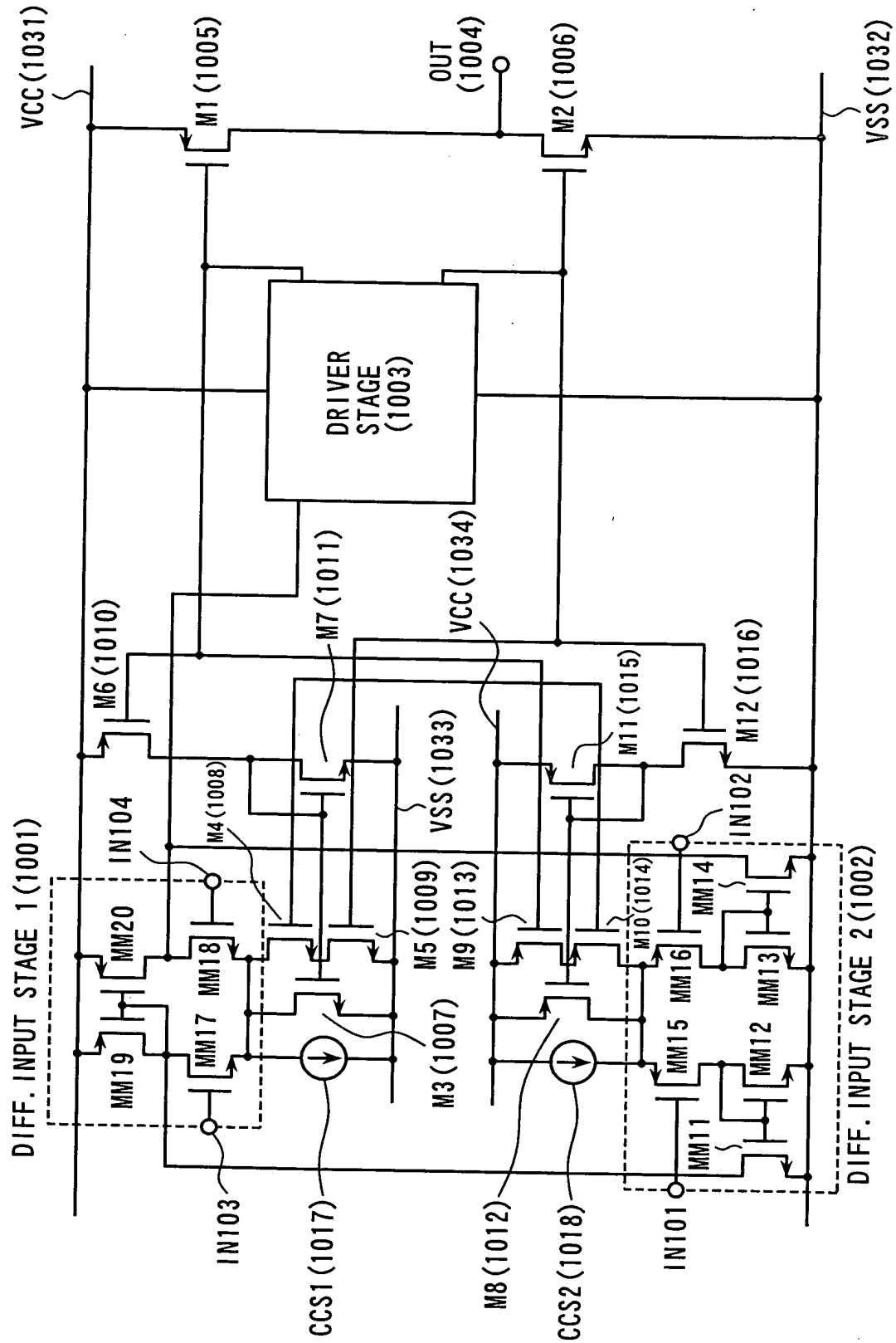






FIG. 13

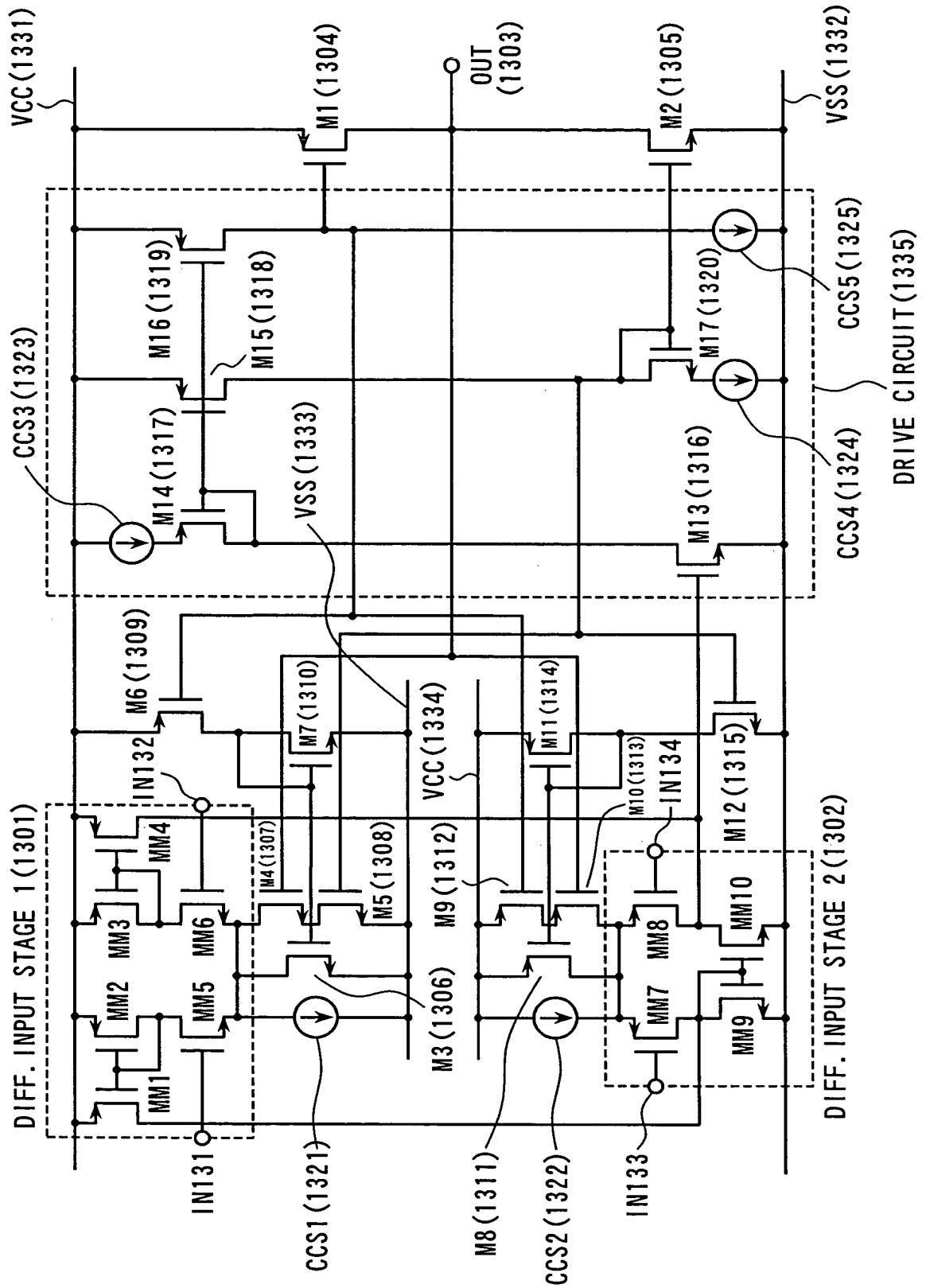


FIG. 14

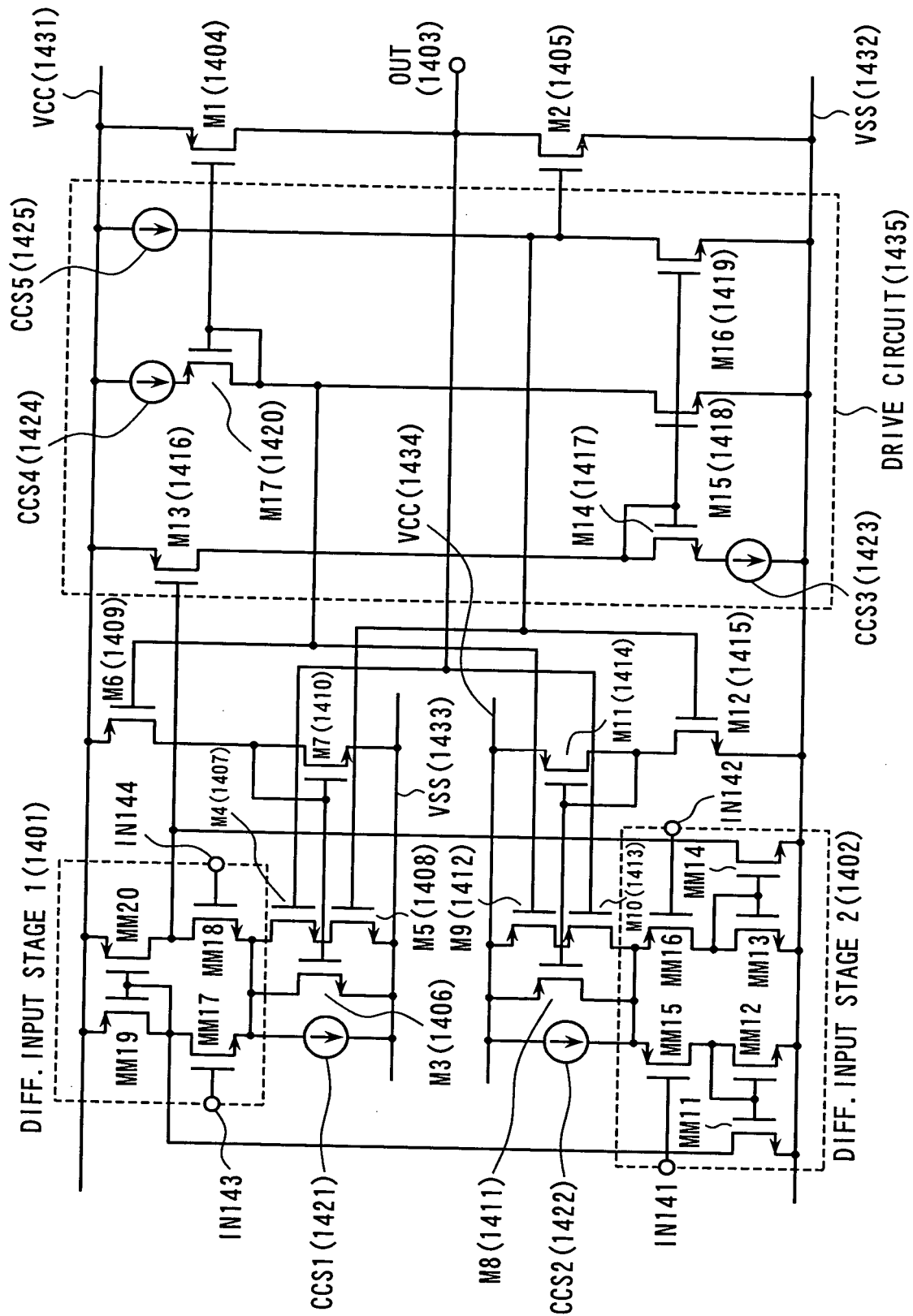


FIG. 15

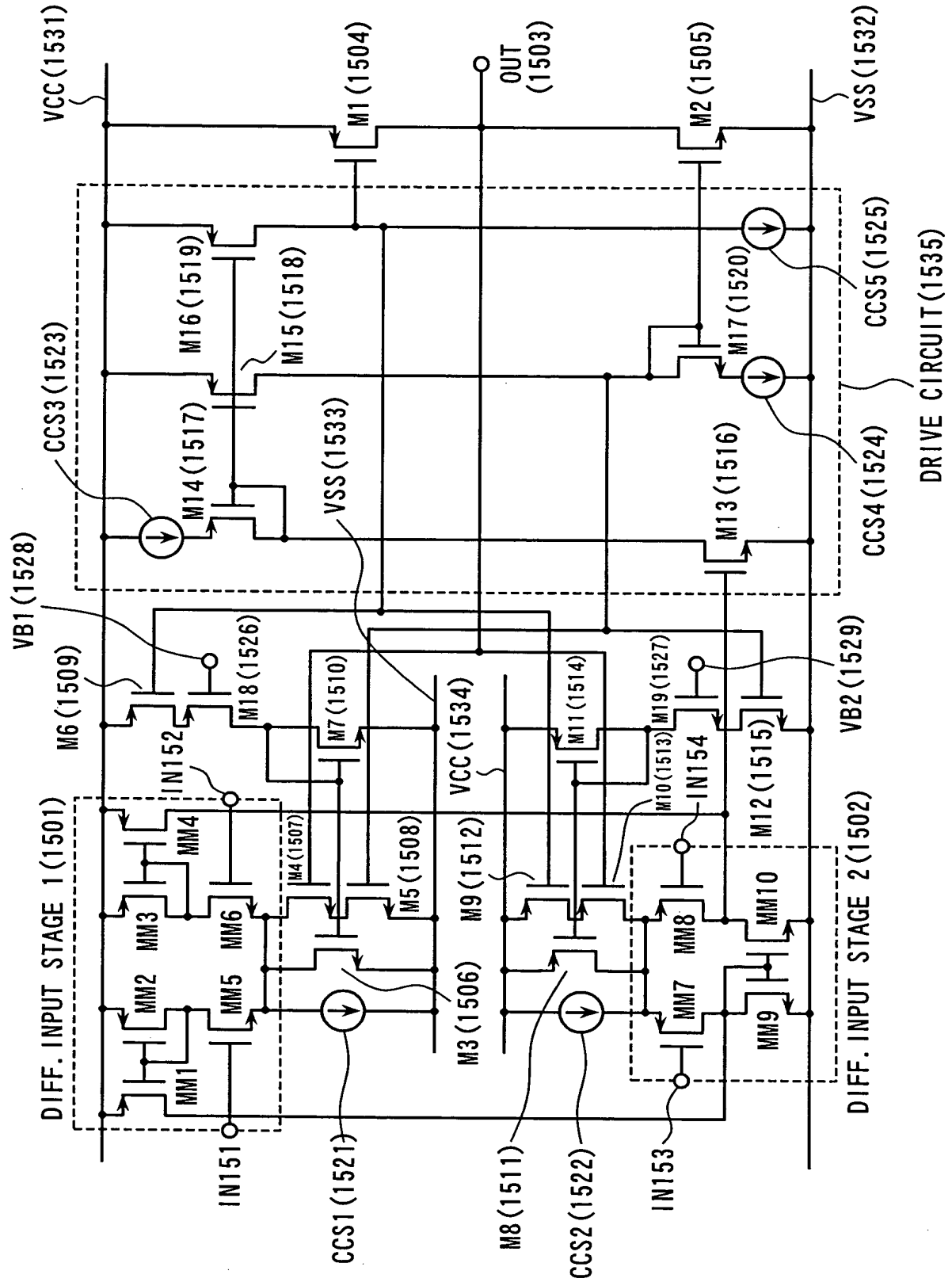


FIG. 16

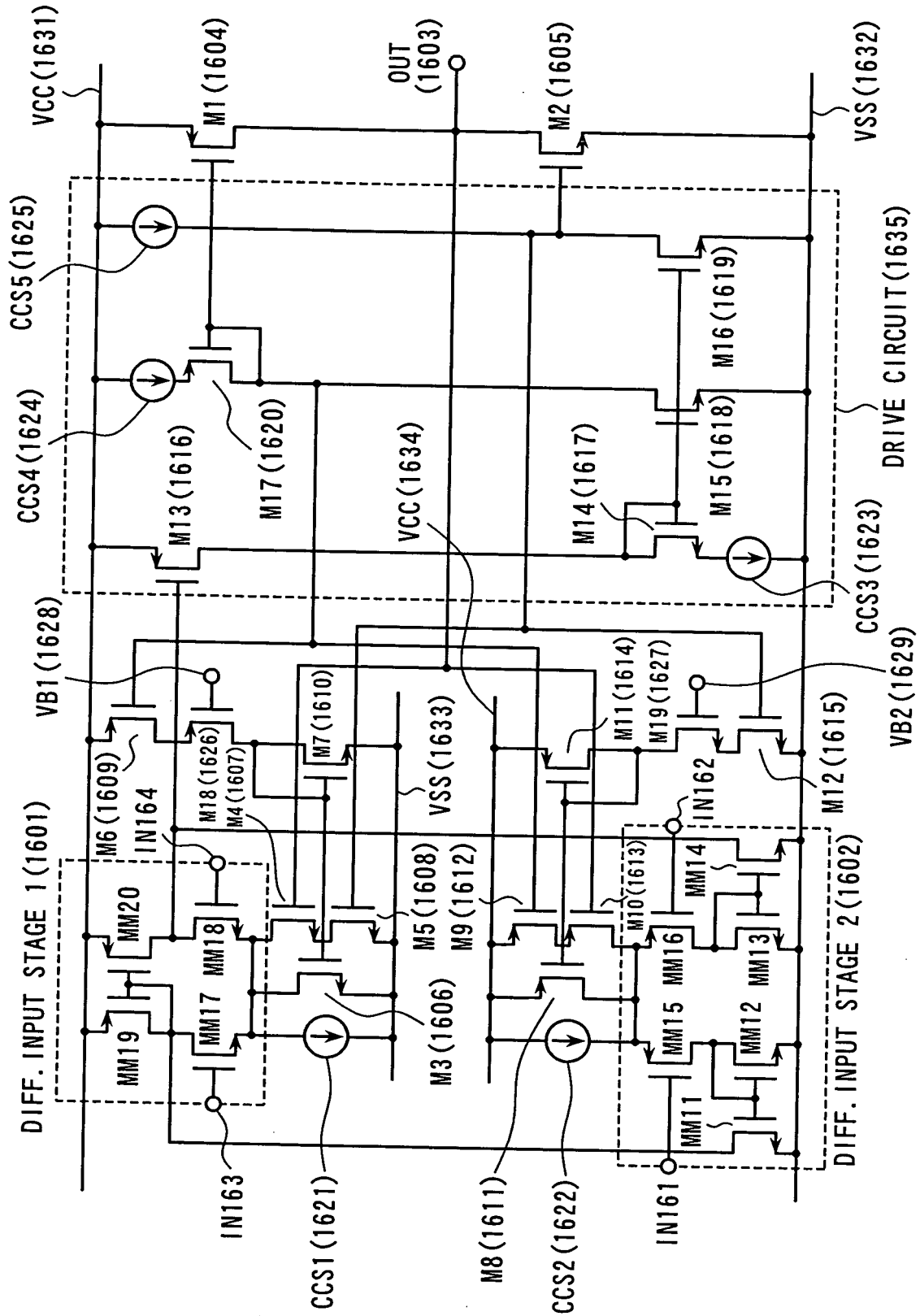




FIG. 17

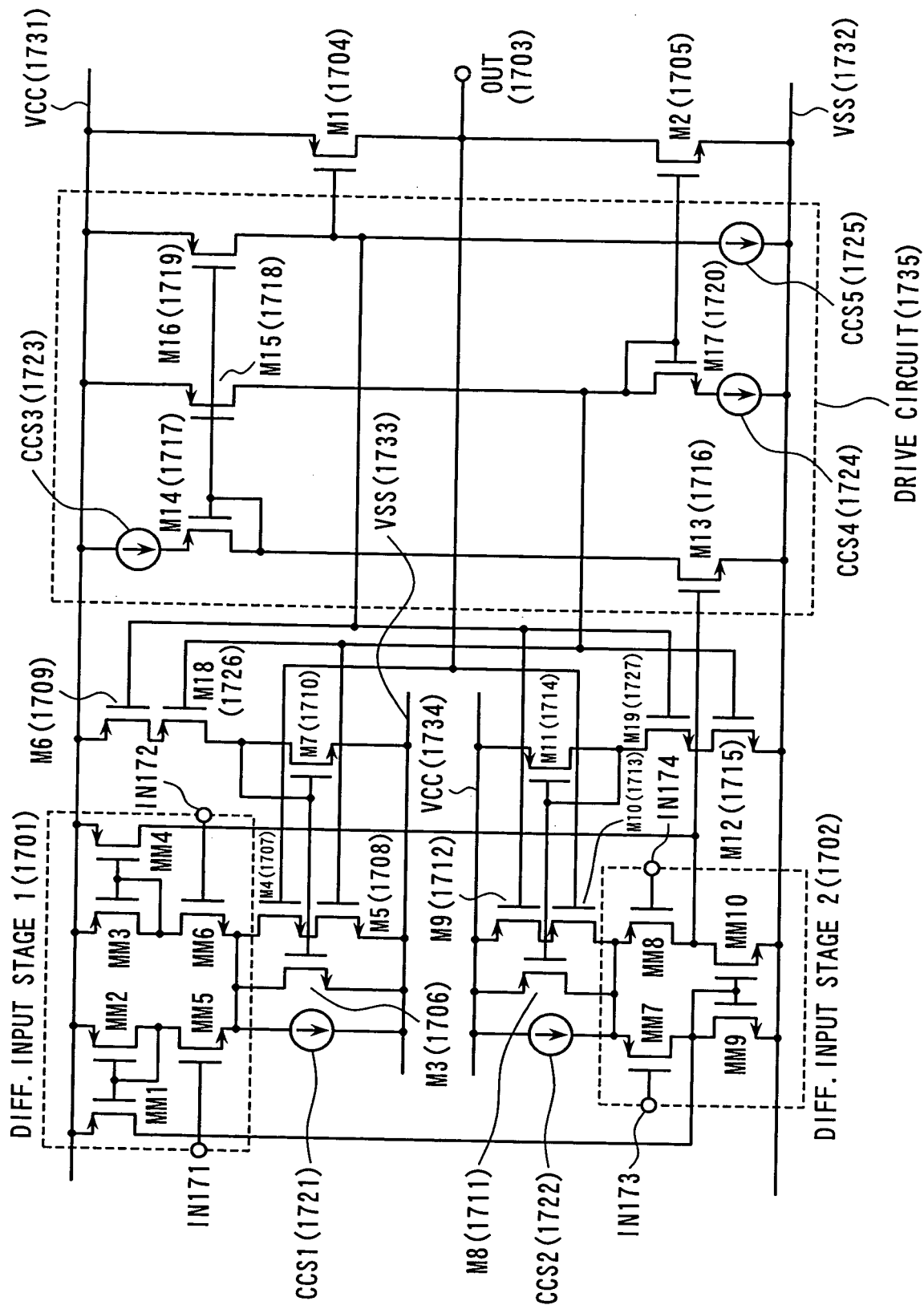


FIG. 18

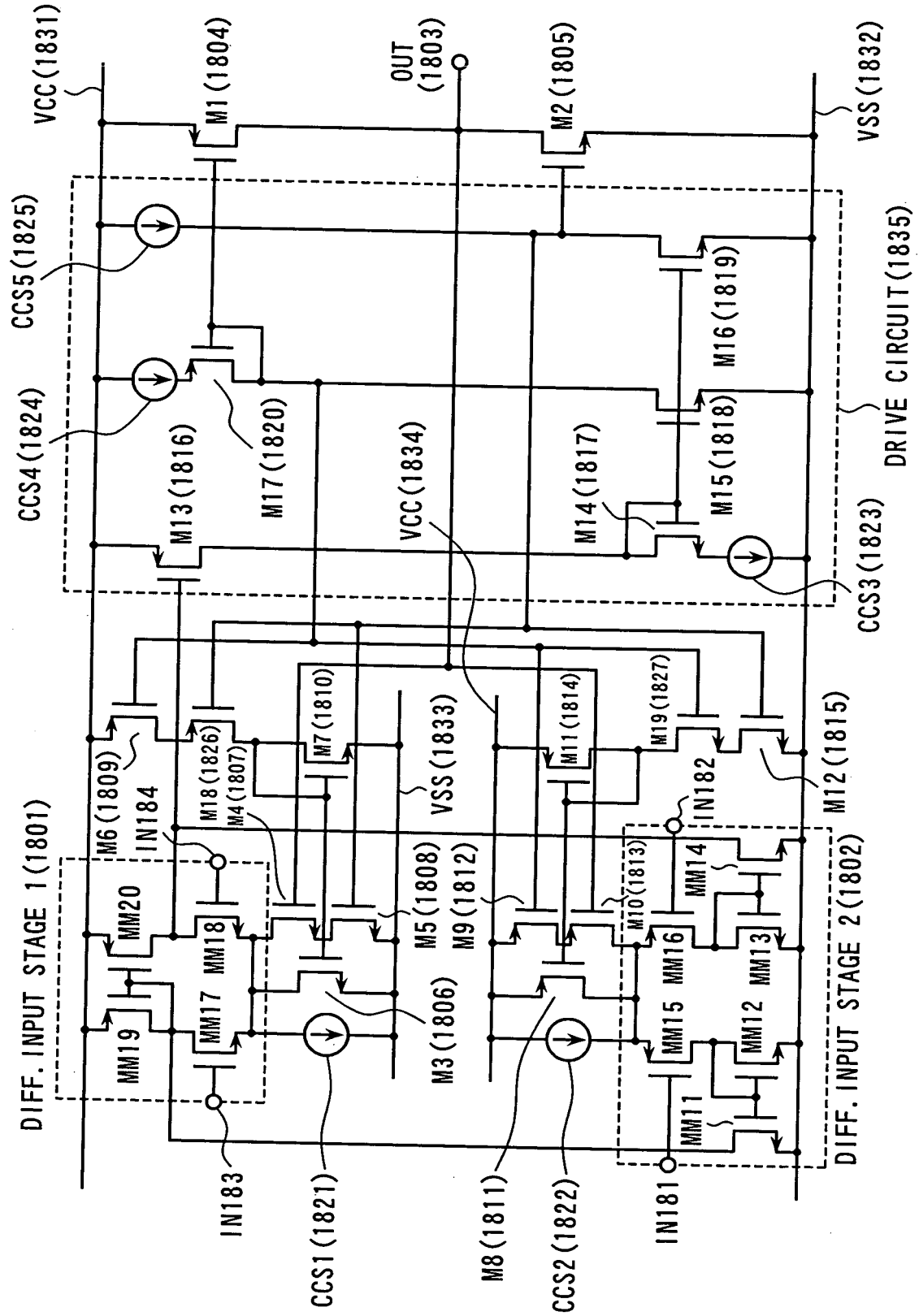
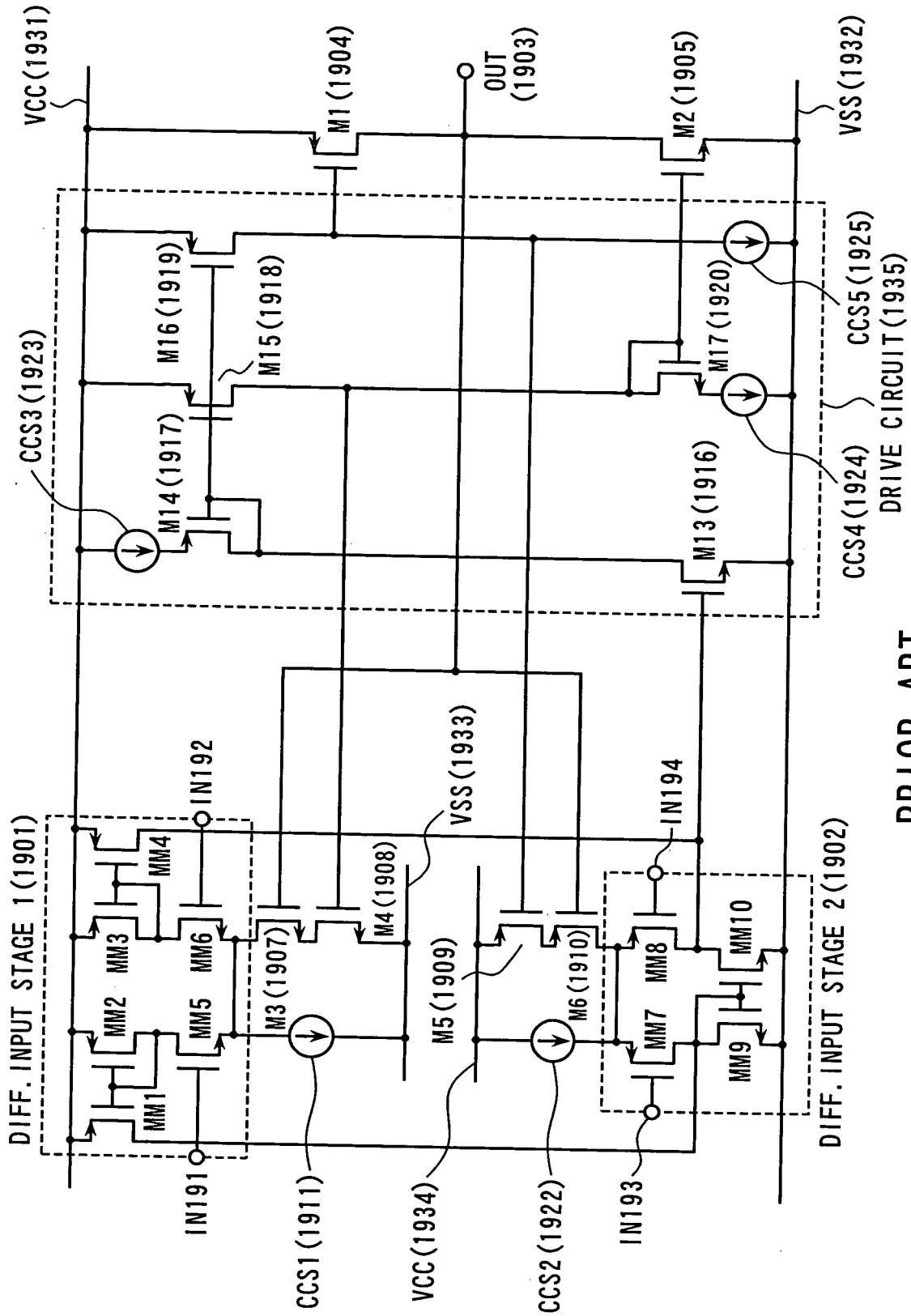


FIG. 19



PRIOR ART

FIG. 20A

SIMULATION RESULT	STATIC CURRENT VALUE
INVENTION	23.202
PRIOR ART	20.786

11.6% INCREASE

UNIT:  $\mu A$

AMPLITUDE (V)  
VCC=4.0V 3.8-0.2  
VCC=4.6V 4.4-0.2  
VCC=5.0V 4.8-0.2

FIG. 20B

SIMULATION RESULT	OPERATING CURRENT VALUE ( $\mu A$ )		
	VCC=4.0V, Ta=85°C, Vt=H	VCC=4.6V, Ta=25°C, Vt=C	VCC=5.0V, Ta=40°C, Vt=L
INVENTION	26.987	39.848	57.383
PRIOR ART	24.593	35.504	50.744

9.7% INCREASE

12.2% INCREASE

13.1% INCREASE

FIG. 20C

SIMULATION RESULT	SETTLING TIME ( $\mu s$ )				
	VCC=4.0V, Ta=85°C, Vt=H				
UP or DW	SUT	SDT	SUT	SDT	SDT
INVENTION	0.840	0.870	0.570	0.630	0.460
PRIOR ART	1.490	1.570	0.880	0.910	0.570

43%  
DECREASE

45%  
DECREASE

35%  
DECREASE

30%  
DECREASE

32%  
DECREASE

20%  
DECREASE

FIG. 21

